

## ABSTRACT

The power supply (20) for LEDs provides power to a LED light source (10) having a  
5 variable number of LEDs wired in series and/or in parallel. The power supply (20) uses  
current and voltage feedback to adjust power to the LEDs and provides protection to the LED  
light source (10). A feedback controller (27) compares sensed current and sensed voltage to a  
reference signal and generates a feedback signal, which is processed by a power factor  
corrector (124) to adjust the current flow through the transformer supplying current to the  
10 LEDs. A LED control switch (24) clamps a peak of the current to the LEDs to provide  
further protection to the LED light source (10). A short/open detection circuit (30) indicates  
any detection of a "LED outage" of the LED light source (10).